

defining a foveation point in the video image;
defining a foveated area in proximity to said foveation point;
extracting a first plurality of data signals from said video image
representing said foveated area;
extracting a second plurality of data signals from said video image
representing a background area;
encoding the extracted first plurality of data signals with a first error
correction protocol that is based on a low allowable error threshold to create a
first encoded signal; and
encoding the extracted second plurality of data signals with a second error
correction protocol different from the first error correction protocol to create a
second encoded signal, the second error correction protocol has a higher
allowable error threshold.

21. (NEW) The method according to Claim 20, wherein the step
of defining said foveation point comprises the step of:

pointing a video device at a location of the image using a means for
pointing.

22. (NEW) The method according to Claim 21, wherein the
pointing means comprises at least one of: a computer keyboard; a computer

mouse; a joystick, and an eye tracking device.

23. (NEW) The method according to Claim 20, further comprising the step of:

calculating a local bandwidth threshold based on said foveation point; and

wherein the step of defining said foveation area comprises the steps of:

calculating a local bandwidth for each pixel group in said video image; and

incorporating those pixel groups having a respective local bandwidth above said local bandwidth threshold into said foveation area.

24. (NEW) The method according to Claim 20, further comprising the steps of:

packetizing the first encoded signal with inserted synchronization markers occurring after a first predetermined number of bits; and

packetizing the second encoded signal with the inserted synchronization markers occurring after a second predetermined number of bits wherein the first number is smaller than the second number.

25. (NEW) A method for the processing and transmitting of video image data from a first electronic device to a second electronic device,

comprising the steps of:

in the first electronic device:

defining a foveation point in a video image;

defining at least one foveated area around said foveation point;

extracting a first plurality of data signals representing said foveated area;

extracting a second plurality of data signals representing a background area;

encoding the extracted first plurality of data signals with a first error correction protocol to create a first encoded signal;

encoding the extracted second plurality of data signals with a second error correction protocol different from the first error correction protocol to create a second encoded signal;

transmitting the first and second encoded signals to the second electronic device;

in the second electronic device:

decoding the first transmitted encoded signal;

correcting errors within the first transmitted encoded signal using the first error correction protocol to create a received foveated area; and

decoding the second transmitted encoded signal; and

correcting errors within the second transmitted encoded signal

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using the second error correction protocol to create a received background area.

26. (NEW) The method according to Claim 25, wherein the step of defining said foveation point comprises the step of:

pointing the first video device at a point of interest using a means for pointing.

27. (NEW) The method according to Claim 26, wherein the pointing means comprises at least one of: a computer keyboard; a computer mouse; a joystick, and an eye tracking device.

28. (NEW) The method according to Claim 25, wherein:
the first error correction protocol has a low allowable error threshold; and
the second error correction protocol has a higher allowable error threshold.

29. (NEW) The method according to Claim 25, further comprising the step of:

calculating a local bandwidth threshold based on said foveation point;
and

wherein the step of defining said foveation area comprises the steps of:

calculating a local bandwidth for each pixel group in said video

image; and

incorporating those pixel groups having a respective local bandwidth above said local bandwidth threshold into said foveation area.

30. (NEW) The method according to Claim 25, further comprising the steps of:

packetizing the first encoded signal with inserted synchronization markers occurring after a first predetermined number of bits; and

packetizing the second encoded signal with the inserted synchronization markers occurring after a second predetermined number of bits wherein the first number is smaller than the second number.

31. (NEW) The method according to Claim 25, wherein the first plurality of data signals comprises all pixel signals included in a high-resolution area of said video image.

32. (NEW) The method according to Claim 25, wherein the first plurality of data signals comprises all pixel signals that are included in a high motion area of said video image.

33. (NEW) The method according to Claim 25, wherein the first

error correction protocol comprises at least one of parity checks, cyclic redundancy checks, forward error correction algorithms, automatic repeat request algorithms or error resiliency conforming to video communications industry standards H263++ and/or MPEG-4.

34. (NEW) The method according to Claim 25, wherein the second error correction protocol comprises at least one of parity checks, cyclic redundancy checks, forward error correction algorithms, or error resiliency conforming to video communications industry standards H263++ and/or MPEG-4.

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35. (NEW) The method according to Claim 25, further comprising the step of:

transmitting a return error signal for changing the foveation point.

36. (NEW) The method according to Claim 25, wherein the transmitting step comprises the steps of:

transmitting the first encoded signal;

transmitting the second encoded signal at a predetermined time after the transmitting of said first encoded signal.